



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/003,526	12/06/2001	Chii Wann Lin	BHT-3134-60	5689
7590 11/23/2004 RABIN & BERDO<P>C> 1101 14th Street N.W. Suite 500 Washington, DC 20005			EXAMINER AHMED, SHAMIM	
			ART UNIT 1765	PAPER NUMBER

DATE MAILED: 11/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/003,526

Applicant(s)

LIN ET AL.

Examiner

Shamim Ahmed

Art Unit

1765

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-70 is/are pending in the application.
- 4a) Of the above claim(s) 20-69 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 and 70 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Claims 20-69 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 9/8/04.

Specification

2. The substitute specification filed 12/22/03 has not been entered because it does not conform to 37 CFR 1.125(b) and (c) because: the statement as to a lack of new matter under 37 CFR 1.125 (b) is missing.
3. The disclosure is objected to because of the following informalities: At page 7, line 9, the reference numeral "1" is not shown in the figure 1.

Appropriate correction is required.

Drawings

4. The figure 1 is objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: At page 7, line 9, the phrase "resistor 1" include reference numeral "1" is not shown in figure 1.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not

accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 1-10, 12-19 and 70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamada et al (6,557,411).

Yamada et al disclose a flow sensor having chip area, resistance valued from 50-1000 ohms (Ω) with wire bonding, wherein chip area can be optimized by optimizing the electrodes (col.4, lines 56-65, col.11, lines 29-30 and col.13, lines 34-41).

Yamada et al remain silent about the specific size of the chip base.

However, it would have been obvious to one of ordinary skill in the art at the time of claimed invention to optimize the size of the chip base, since Yamada et al teach the chip area can be optimized for decreasing the fabrication cost (col.13, lines 34-41).

Furthermore, it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Yamada also teach that the base chip comprises silicon and which is processed by wet etching (col.12, lines 36-63).

Yamada et al teach the introduction of a protection layer and the resistance could comprise noble metal and platinum (col.12, lines 28-31 and col.13, lines 42-45).

Yamada et al teach that the flow sensor also comprises connection lead or pad of conductive material such as aluminum, gold etc. (col.12, lines 53-56).

8. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamada et al (6,557,411) as applied to claims 1-10,12-19 and 70 above, and further in view of Sarihan (5,515,735).

Yamada et al discussed above in the paragraph 5 but fail to teach the chip base is etched with hydrofluoric acid.

However, in a silicon etching process both KOH and hydrofluoric acid can be used (col.3, lines 27-32).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of claimed invention to combine Sarihan's teaching into Yamada et al's teaching because both the KOH and hydrofluoric acid are functional equivalent for efficient silicon wet etching as taught by Sarihan.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Karaki (6,104,075) teaches a temperature sensor having chip area about 50 micrometer x 50 micrometer with polysilicon resistance (col.3 lines 16-25); JP-11-281444 disclose a flow sensor in which wire width and resistance value are optimized (see the abstract).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shamim Ahmed whose telephone number is (571) 272-1457. The examiner can normally be reached on M-Thu (7:00-5:30) Every Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nadine G Norton can be reached on (571) 272-1465. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1765

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Shamim Ahmed
Examiner
Art Unit 1765

SA
November 16, 2004